REMARKS

Claims 1-5 and 8-19 were previously pending in the application. All claims were rejected. Claim 12 is cancelled herein. Claim 1 has been amended to incorporate the limitations from cancelled Claim 12, so as to narrow the claim scope. Claims 1-5, 8-11 and 13-19 remain pending in the application.

Claim Rejections- 35 U.S.C. §103

(a) Claims 1-5, 8-12, 14-17 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gruen *et al.* (U.S. Patent No. 6,592,839) in view of Asmussen *et al.* (U.S. Patent No. 5,311,103).

According to MPEP §2143, to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). Gruen *et al.* describes the preparation of nanocrystalline diamond. It is stated in the rejection

that Gruen *et al.* explicitly teaches to exclude oxygen and other gases, citing column 4, lines 15-20. However, the cited text refers only to the use of hydrocarbons which consists fundamentally of carbon and hydrogen without added oxygen, chlorine or other elements. Thus, the hydrocarbon used as the carbon source does not have oxygen or other elements as part of its structure, however this statement does not speak to the exclusion of oxygen or nitrogen gases in the mixture. None of the cited references, taken alone or in combination, show or suggest using less than 10 ppm oxygen or nitrogen. In regards to Asmussen, this reference teaches an apparatus which is not disclosed to be "essentially free of leaks" as set forth in Claim 1. One skilled in the art could not derive the claimed invention from the combination of these references. Reconsideration of the rejection is requested.

(b) Claims 13 and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gruen *et al.* (U.S. Patent No. 6,592,839) in view of Asmussen *et al.* (U.S. Patent No. 5,311,103) and further in view of Herb *et al.* (U.S. Patent No. 5,273,790).

Claims 13 and 18 were rejected over the references previously applied in view of Herb *et al.* (U.S. Patent No. 5,273,790). As set forth in Herb *et al.*, molybdenum is known as a substrate holder but not in the process as set forth in Claim 1. None of the references describe coating a silicon carbide seal as in Claim 18 and Figures 18 and 19 (Page 27 of the specification). None of the cited references, taken alone or in combination, show or suggest using less than 10 ppm oxygen or nitrogen. Reconsideration of the rejection is requested.

(c) Claims 1-5, 8-12, 14-17 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gruen *et al.* (U.S. Patent No. 6,592,839) in view of Asmussen *et al.* (U.S. Patent No. 4,585,668).

Gruen *et al.* has been discussed previously. Asmussen *et al.* '668 does not disclose an apparatus which was enabled to perform the process as claimed as set forth in connection with Asmussen '103. None of the cited references, taken alone or in combination, show or suggest using less than 10 ppm oxygen or nitrogen. Reconsideration of the rejection is requested.

(d) Claims 13 and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gruen *et al.* (U.S. Patent No. 6,592,839) in view of Asmussen *et al.* (U.S. Patent No. 4,585,668) and further in view of Herb *et al.* (U.S. Patent No. 5,273,790).

As discussed previously in connection with Claims 13 and 18, a molybdenum holder has not been disclosed or suggested in a process as claimed. None of the cited references, taken alone or in combination, show

or suggest using less than 10 ppm oxygen or nitrogen. Reconsideration of the rejection is requested.

(e) Claims 1-5, 8-12, 14-17 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gruen *et al.* (U.S. Patent No. 6,592,839) in view of Asmussen *et al.* (U.S. Patent No. 4,906,900).

These claims are patentable for the reasons already discussed in relation to Gruen *et al.* and Asmussen '103. None of the cited references, taken alone or in combination, show or suggest using less than 10 ppm oxygen or nitrogen. Reconsideration of the rejection is requested.

(f) Claims 13 and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gruen *et al.* (U.S. Patent No. 6,592,839) in view of Asmussen *et al.* (U.S. Patent No. 4,906,900) and further in view of Herb *et al.* (U.S. Patent No. 5,273,790).

These claims are patentable for the same

reasons already discussed. None of the cited references, taken alone or in combination, show or suggest using less than 10 ppm oxygen or nitrogen. Reconsideration of the rejection is requested.

(g) Claims 1-5, 8-12, 14-17 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gruen *et al.* (U.S. Patent No. 6,592,839) in view of Asmussen *et al.* (U.S. Patent No. 4,727,293).

These claims are patentable for the reasons already discussed in relation to Gruen *et al.* None of the cited references, taken alone or in combination, show or suggest using less than 10 ppm oxygen or nitrogen. Reconsideration of the rejection is requested.

(h) Claims 13 and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gruen *et al.* (U.S. Patent No. 6,592,839) in view of Asmussen *et al.* (U.S. Patent No. 4,727,293) and further in view of Herb *et al.* (U.S. Patent No. 5,273,790).

None of the cited references, taken alone or in combination, show or suggest using less than 10 ppm oxygen or nitrogen. These claims are patentable for the reasons previously discussed. Reconsideration of the rejection is requested.

Claim Rejections- Double Patenting

(i) Claims 1-5, 8-12, 14-17 and 19 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2 and 4 of U.S. Patent No. 4,585,668 in view of Gruen *et al*. (U.S. Patent No. 6,592,839).

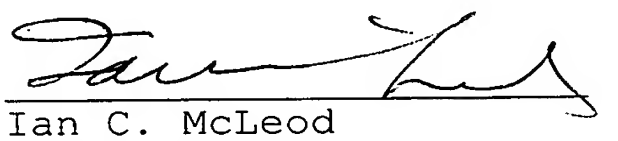
The presently pending invention represents an improvement not disclosed or suggested or claimed in these references. None of the cited references, taken alone or in combination, show or suggest using less than 10 ppm oxygen or nitrogen. Reconsideration of the rejection is requested.

(j) Claims 1-5, 8-12, 14-17 and 19 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 22-27 of U.S. Patent No. 4,585,668 in view of Gruen *et al.* (U.S. Patent No. 6,592,839).

These references do not disclose or suggest the improvement claimed. None of the cited references, taken alone or in combination, show or suggest using less than 10 ppm oxygen or nitrogen. Reconsideration of the rejection is requested.

In light of the above, it is now believed that Claims 1-5, 8-11 and 13-19 are patentable and in condition suitable for allowance. Alternatively, the above claim cancellation and amendments present the claims in better form for consideration on appeal. Therefore, entry of this amendment for purposes of appeal is requested.

Respectfully submitted,



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